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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/686,471

10/15/2003

Mu-Jing Li

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7590

01/10/2006

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EXAMINER

DO, THUAN V

ART UNIT

PAPER NUMBER

2825

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/686,471

Applicant(s)

LI ET AL.

Examiner

Thuan Do

Art Unit

2825

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-43 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-43 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/07 and 4/30/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. This office action is responsive to amendment dated on 12/27/2005. Claims 1-43 are pending in this office action.

The remark of applicant's representative on the restriction is persuasive therefore the claims 1-43 are examined as follow.

Claim objections

Claims 1,21,28,32,36,40 the terms "features from the given cell" and "adding features" are they the same objects of features and what are they?;

The term "removing all" is undefined in the specification;

The term "effectuate" has no definition.

Clarification or correction is required.

Claim Rejections - 35 USC 112

The following is a quotation of the second paragraph 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 1,21,28,32,36,40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

2. Claims 1-43 are rejected under 35 U.S.C. 102(e) as being unpatentable over Dillon et al. Pat. No. 6748579.

Regarding claim 1: Dillon teaches a method comprising:

creating a patch cell for a given cell of the layout, said patch cell including at least some features from higher level cells above the given cell, and further including at least some features from the given cell (col. 3, line 64 through col. 4, line 7);

identifying layout errors in the patch cell (col. 1, line 48-58);

adding features to the patch cell to correct one or more of the identified errors (col. 3, line 64 through col. 4, line 7);

removing all but the added features from the patch cell (col. 3, line 64 through col. 4, line 7); and then

instantiating the patch cell into the layout to thereby effectuate the patch cell corrections into the layout (col. 3, line 64 through col. 4, line 7).

Regarding claim 2: Dillon teaches a method with a cluster cell (figure 1).

Regarding claim 3: Dillon teaches a method with cell levels (figure 2).

Regarding claim 4: Dillon teaches a method with metal and via (col. 3).

Regarding claim 5: Dillon teaches a method with an instantiation of cell (col. 3).

Regarding claim 21: Dillon teaches a method comprising:

creating a patch cell for a cluster cell of the layout, said patch cell including covering metal features from higher level cells above the cluster cell, and further including metal and via features from the cluster cell;

identifying isolated vias in the patch cell layout;

adding dummy metal features to the patch cell within landing areas containing one or more identified isolated vias; then

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identifying remaining isolated vias in the patch cell layout;
adding via fill arrays within landing areas containing one or more identified isolated vias;
removing all but the added features from the patch cell;
flagging any identified isolated vias which remain uncorrected; and then
instantiating the patch cell into the layout to thereby effectuate the patch cell corrections into the layout (Fig. 1 and col. 3, line 25 through col. 4, line 7 and col. 1, line 48-58).

The remaining claims of 102(e) section contain features similar to the rejection of claims 1-5 and 21 and rejected in the rationale.

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thuan Do whose telephone number is 571-272-1891. The examiner can normally be reached on Monday-Friday 8:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Chiang can be reached on 571-272-7483. The fax phone numbers for proceeding this application is 571 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.



Thuan Do
Primary examiner
01/07/2006